

Application No. 09/438,955

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18. (New) A surface emitting cavity laser, comprising:
a laser stack consisting essentially of a high reflectivity mirror, a low reflectivity mirror;
and an active light-amplifying region located between said high and low reflectivity mirrors;
a light output port located on one side of said stack adjacent said low reflectivity mirror
for transmitting light emitted by said active light-amplifying region and constituting an output of
said laser; and
an ohmic contact on an opposite side of said stack adjacent said high reflectivity mirror,
said ohmic contact being photon transparent for transmitting some of said light emitted by said
light-amplifying region that passes through said high reflectivity mirror for monitoring with an
external photodetector.
19. (New) A surface emitting cavity laser as claimed in claim 18, wherein said ohmic
contact is made of a photon transparent material.
20. (New) A surface emitting cavity laser as claimed in claim 19, wherein said photon
transparent material comprises Indium Tin Oxide.
21. (New) A surface emitting cavity laser as claimed in claim 18, wherein said ohmic
contact contains an aperture to pass light therethrough.

Application No. 09/438,955

22. (New) A surface emitting cavity laser as claimed in claim 18, wherein said ohmic contact has a thickness between 1 and 100 nm.

23. (New) A surface emitting cavity laser as claimed in claim 18, wherein said laser is a bottom emitting vertical cavity surface emitting laser having a substrate adjacent the low reflectivity mirror, said output port is provided by a hole in said substrate, and said ohmic contact is on a side of said stack remote from said substrate.

24. (New) A surface emitting cavity laser as claimed in claim 23, wherein said ohmic contact is made of a photon transparent material.

25. (New) A surface emitting cavity laser as claimed in claim 24, wherein said photon transparent material comprises Indium Tin Oxide.

26. (New) A surface emitting cavity laser as claimed in claim 18, wherein said laser is a top emitting vertical cavity surface emitting laser with a substrate adjacent the high reflectivity mirror, and said ohmic contact is located on said substrate.

27. (New) A surface emitting cavity laser as claimed in claim 26, wherein said substrate is transparent at the wavelength of said light.

33
10 Application No. 09/438,955

28. (New) A surface emitting cavity laser as claimed in claim 27, wherein said ohmic contact is made of a photon transparent material.

29. (New) A surface emitting cavity laser as claimed in claim 28, wherein said photon transparent material comprises Indium Tin Oxide.
